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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,304	08/18/2003	Roger Y. Tsien	AURO1140-2	4165

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EXAMINER

SMITH, ZANDRA V

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/643,304	Applicant(s) TSIEN ET AL.	
	Examiner Zandra V. Smith	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 33-42 and 56-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-42 and 56-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/10/04; 8/18/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election of claims 33-42 and 56-58 in the reply filed on 07 June 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 33-35 are rejected under 35 U.S.C. 102(b) as being anticipated by *Stylli et al.* (5,985,214).

As to **claim 33**, Stylli discloses systems and methods for rapidly identifying useful chemicals in liquid samples, comprising:

an optical assembly (fig. 8) comprising a ball lens (1170) and a trifurcated optical fiber (1160) for dual optical interrogation (col. 25, lines 25-30) and in optical communication with the ball lens (col. 25, lines 5-20 and col. 26, lines 35-45).

As to **claim 34**, Stylli discloses everything claimed, as applied above, in addition trifurcated fiber includes a first optically isolated emission bundle to collect light, second optically isolated emission bundle to collect light, and an excitation bundle (col. 26, lines 38-42).

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As to **claim 35**, Stylli discloses everything claimed, as applied above, in addition the ball lens is separated from the fiber by a transmission space (see fig. 8).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 36-37, 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Stylli et al.* (5,985,214) in view of *Hlousek* (5,037,199).

As to **claims 36 and 41**, Stylli discloses everything claimed, as applied above, with the exception of the material of which the ball lens is composed, however Hlousek discloses a ball lens composed of sapphire (col. 4, lines 54-60). It would have been obvious to one having ordinary skill in the art at the time of invention to compose the ball lens of sapphire or any other material necessary to provide an appropriate index of refraction.

As to **claim 37**, Stylli and Hlousek disclose everything claimed as applied above, in addition the ball lens includes an anti-reflective coating (Stylli, col. 25, lines 10-15).

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Stylli et al.* (5,985,214) and *Hlousek* (5,037,199) and further in view of *Harris et al.* (5,926,592).

As to **claim 38**, Stylli and Hlousek disclose everything claimed as applied above, in addition the trifurcated fiber includes a first plurality of emission bundles for receiving light of a

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first wavelength and second plurality of emission bundles for receiving light of a second wavelength (col. 26, lines 25-35). Stylli and Hlousek differ from the claimed invention in that the distribution of the fibers is not disclosed, however Harris discloses an optical fiber image that includes random and non-random distribution of the bundles with respect to one another (see figs. 2a-2d), it would have been obvious to one having ordinary skill in the art at the time of invention to arrange the fibers in the bundle to ensure that the object is evenly illuminated.

Claims 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Stylli et al.* (5,985,214) in view of *Harris et al.* (5,926,592).

As to **claims 56-58**, Stylli discloses everything claimed, as applied above, in addition the trifurcated fiber includes a first plurality of emission bundles for receiving light of a first wavelength and second plurality of emission bundles for receiving light of a second wavelength (col. 26, lines 25-35). Stylli differs from the claimed invention in that the distribution of the fibers is not disclosed, however Harris discloses an optical fiber image that includes random and non-random distribution of the bundles with respect to one another (see figs. 2a-2d), it would have been obvious to one having ordinary skill in the art at the time of invention to arrange the fibers in the bundle to ensure that the object is evenly illuminated.

Allowable Subject Matter

Claims 39-40, 42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record, taken alone or in combination, fails to disclose or render obvious an optical

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assembly that includes trifurcated fiber having a first set of bundles for transmitting light of a first wavelength and second set of bundles for transmitting light of a second wavelength and third set of bundles for transmitting light of a third wavelength (claim 39), in combination with the rest of the limitations of claim.

Double Patenting

Claims 33-42 and 56-58 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 6,349,160 B2.

Although the conflicting claims are not identical, they are not patentably distinct from each other because '160 provides a ball lens and a trifurcated optical fiber for dual optical interrogation and in communication with the ball lens the ball lens being separated from the fiber by a predetermined distance (claim 1), first and second optically isolated emission bundles (claim 2), sapphire material (claim 3), anti-reflective coating (claim 4), a plurality of emission bundles (claim 6), first second and third wavelengths (claim 7), and separation distance (claim 8).

Fax/Telephone Information

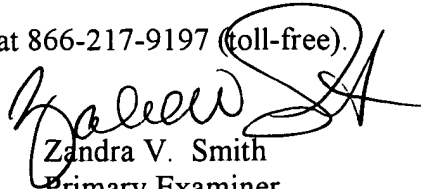
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zandra V. Smith whose telephone number is (571) 272-2429.

The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Zandra V. Smith
Primary Examiner
Art Unit 2877

February 4, 2005